

REMARKS

This is in response to the Office Action mailed June 12, 2003. The Office Action rejected claims 30, 39-44, 52, and 53 under 35 U.S.C. § 101, claims 30, 43, and 54 under 35 U.S.C. § 112, claims 30, 39, 52-54 under 35 U.S.C. § 102, and rejected claims 40, 42-44 under 35 U.S.C. § 103.

To more clearly claim the novel aspects of the invention, Applicants have amended claims 30, 39-44, 52, and 53. Claims 30, 39-44, 52, and 53 remain pending in the application. Reconsideration in light of the amendments and remarks made herein is respectfully requested.

Drawings

The Office Action noted that it is Applicant's responsibility to ensure that the drawing are corrected in accordance with the instructions set forth in Paper No. 12, mailed on February 20, 2003.

Applicants sent in a substitute set of corrected drawings on January 13, 2003. In Paragraph 3 of the Office Action dated February 20, 2003, the Examiner noted the substitute drawings were received and approved. Applicants believe that no further changes to the drawings are needed at this time. If this is not so, Applicants respectfully request the Examiner specify the reasons why the substitute drawings are not acceptable.

Rejections Under 35 U.S.C. §101

The Office Action rejected claims 30, 39-44, 52, and 53 under 35 U.S.C. §101 as being directed to non-statutory subject matter. Applicants submit that this rejection is now moot in view of the amendments to claims 30, 39-44, 52 and 53. These claims now recite "a data storage

method" and the steps to carry said method. Applicants believe that this rejection is overcome by these amendments.

Rejections Under 35 U.S.C. §112

The Office Action rejected claims 30, 43 and 54 under 35 U.S.C. §112 as being indefinite for failing to particularly point out and distinctly claim the subject matter of which applicant regards as the invention.

As to Claims 30 and 54, the Office Action states that "applicant does not clearly define where or why the code is being transmitted". Applicants assume that the Office Action refers to claim 53 since there is no claim 54 in the present application. Applicants submit that, as amended, the claims now recite that the "method of storing a virtual machine instruction ... to be executed by a virtual machine" and "transmitting the instruction block to the virtual machine." Applicants submit that these amendments overcome the present rejection as they specify where the code is being transmitted.

As to Claim 43, the Examiner asserts that the "applicant does not clearly define operation". Applicants believe this rejection is overcome with amendments made to parent Claim 40 that recite the process of the claimed method. Claim 43 merely recites the environment in which the method takes place.

Rejections Under 35 U.S.C. § 102

The Office Action rejected claims 30, 39, 53, and 54 under 35 U.S.C. § 102(e) as being anticipated by Adl-Tabatabai (hereinafter Adl-Tabatabai) (U.S. Patent No. 6,170,083).

Applicants assume that the Office Action refers to claims 30, 39, 52, and 53 since no claim 54 has been presented in this application.

Applicants submit that the teachings in Adl-Tabatabai are patentably distinguishable from the present claimed invention. Adl-Tabatabai discloses a step of dividing a virtual machine code into basic blocks (Step 430 in Fig. 4) and then compiling the basic blocks into a native code by a compiler (Step 450 in Fig. 4). The native code is then inputted and executed by computer hardware 310 (Step 460 in Fig. 4, Column 3, lines 43-44).

Unlike the present invention, which claims an instruction block generated by compiler to be executed by a virtual machine, the basic blocks of Adl-Tabatabai are not compiled to be executed by the Java virtual machine 330. Instead, Adl-Tabatabai requires that the basic blocks be compiled into native code prior to being executed by the Java virtual machine. This is an unnecessary step that is avoided in the present claimed invention.

In addition, unlike the present claimed invention which transmits the instruction block the compiler, the compiler in Adl-Tabatabai does not notify the virtual machine 330 of the virtual machine code blocks. The only description about the virtual machine in Adl-Tabatabai is about maintaining a state of the virtual machine 330 (Column 3, lines 45-47).

On the other hand, as described in the Fifth Embodiment of the present invention, a compiler generates a virtual machine sequence and divides the virtual machine sequence into basic blocks (Fig. 77), and the generated virtual machine sequence is executed by a virtual machine (Fig. 71). In other words, the compiler of the present invention divides the virtual machine sequence into the basic blocks, but does not compile the basic blocks into a native code.

With this, the virtual machine instruction to be executed is stored separately as basic blocks in the virtual machine. Accordingly, process time for execution of the virtual machine sequence is reduced and performance improved. This facilitates use of shared resources especially in a network where different types of computers are connected to each other.

As has been explained, the present invention is clearly different from the invention disclosed in Adl-Tabatabai, and has a distinctive effect. For at least the reasons discussed above, Applicants submit that the invention recited in claims 30, 39, 52, and 53 is patentably distinguishable over Adl-Tabatabai and the prior art of record. Additionally, all dependent claims are also in condition for allowance as a result of their dependence on independent claims 30, 39, 52, and 53.

Applicants respectfully request that the 35 U.S.C. § 102(e) rejections be withdrawn.

Rejections Under 35 U.S.C. § 103

The Office Action rejected claims 40, 42, and 44 under 35 U.S.C. § 103 as being unpatentable over Adl-Tabatabai (U.S. Patent No. 6,170,083) in view of Prosser et al. (hereinafter Prosser) (U.S. Patent No. 6,301,652).

The Office Action rejected claims 41 and 43 under 35 U.S.C. § 103 as being unpatentable over Adl-Tabatabai (U.S. Patent No. 6,170,083) in view of Prosser (U.S. Patent No. 6,301,652), and further in view of Wahbe et al. (U.S. Patent No. 6,151,618).

While Applicants disagree that the cited prior art teaches or suggests the claimed elements, this argument need not be reached since claims 40-44 are dependent on independent

claims 39 that Applicants have amended and is now in condition of allowance. As a result of such dependence, Applicants submit that claims 40-44 are also in condition of allowance.

Applicants respectfully request that the 35 U.S.C. § 103 rejections be withdrawn.

Conclusion

In view of the amendments and remarks made above, it is respectfully submitted that the pending claims are in condition for allowance, and such action is respectfully solicited.

Authorization is hereby given to charge our Deposit Account No. 19-2814 for any charges that may be due. Furthermore, if an extension is required, then Applicants hereby request such an extension.

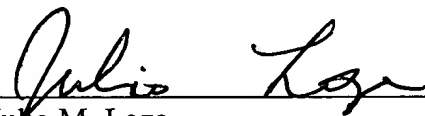
Respectfully submitted,

Snell & Wilmer L.L.P.

I hereby certify that this document and fee is being deposited on October 14, 2003 with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to, Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450.

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Signature

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